REMARKS

This application has been carefully reviewed in view of the above-referenced Office Action, and reconsideration is requested in view of the following remarks.

Applicants notes with appreciation that the Examiner found Applicants' previous remarks about the Fleming reference persuasive and withdrew the rejection under that reference. Similarly, Applicants notes that the previous rejection of claim 8 under 35 USC 112 has been withdrawn.

Regarding the Rejections under 35 U.S.C. §102

Claims 1-3, 9-14, 19-21 and 23-28 were rejected as anticipated by new reference Inuzuka, of record. Applicants respectfully traverse these rejections as follows:

The claims, including independent claims 1, 15, 19, and 29 include recitations of "a frequency generator that generates a local oscillator signal without use of a piezoelectric crystal;" "an oscillator that generates the RF transmitter carrier signal without use of a piezoelectric element", or "generating a local oscillator signal without use of a piezoelectric crystal", or the like, respectively. Generating a local oscillator signal without use of a crystal provides advantages in situations where very low device size and cost are paramount. The examiner is respectfully directed to page 4, lines 3-10; page 6, line 20 to page 7, line 20; page 9, lines 7-12, 20-30; page 20, lines 7 on; as well as other portions of the specification, in which the use of and advantages associated with a frequency reference without the use of crystal materials is discussed.

The examiner in her rejection of the claims under Inuzuka states that this reference does teach a frequency generator that generates a local oscillator signal without use of a piezoelectric crystal; reference is made to FIG. 12 and oscillator 215 of the Inuzuka reference. Applicants respectfully disagree with this reading of the reference. FIG. 12 is simply a block diagram of an embodiment

to which the receivers of FIGs. 11A and 11B are applied. As noted at column 12, lines 20-37, for instance, FIGs. 11A and 11B illustrate a receiver in which

> "two periodic waves are generated with frequencies approximately equal to that of the carrier and the phases shifted by 90 degree [sic] between them. The signal transferred on the carrier from the transmitting equipment is separately multiplied by the two periodic waves. In this example, the periodic wave having a frequency and a phase equal to those of the carrier is normally called an I-phase wave, and the periodic wave having a 90-degre-shifted phase from the I-phase wave is called a Q-phase wave. ...the I-phase and the Q-phase are generated in the receiver independently of the carrier"

FIG. 12 illustrates how these principles of FIGs. 11A and 11B can be applied. In FIG. 12, the oscillator 215 does not say "crystal oscillator" but there is no teaching or suggestion in the reference that oscillator 215 is anything other than a crystal oscillator. Throughout the entire Inuzuka reference it is clear that a crystal oscillator is being discussed. In FIGs. 3 and 6, for instance, the oscillator is explicitly shown and described as a crystal oscillator (see column 5, lines 58-66, column 7, lines 1-22, and column 11, lines 5, 25 and 42, for example) and there is no teaching or suggestion to indicate that oscillator 215 of FIG. 12 is any different. Indeed, the Abstract of Inuzuka explicitly recites "received data by the periodic wave output from a **crystal oscillator**." (emphasis added) Moreover, it is generally known in the art that an oscillator and crystal oscillator may be considered synonymous absent some teaching or suggestion to the contrary.

Additionally, Applicants respectfully submit that while both the present claimed invention and the Inuzuka reference are concerned with minimizing the size and cost of spread spectrum systems and receivers/transceivers, they both approach this problem in completely different ways. The claimed invention provides strong advantages in size and cost by providing a local oscillator signal without the use of a crystal, as recited in the claims. The Inuzuka reference, conversely, approaches this problem by "providing a spread spectrum communications system and receiver for transferring data without regenerating a carrier in a small-scale circuit." (see Summary of the Invention, column 2, lines 49-51, of Inuzuka). Significantly, there is no

teaching, suggestion or disclosure of using anything other than the crystal oscillator discussed throughout the Inuzuka reference.

In view of the above, it is submitted that claims 1-3, 9-14, 19-21 and 23-28 are allowable as presented. Reconsideration and allowance are respectfully requested.

Regarding the Rejections under 35 U.S.C. §103

Claims 7 and 15 were rejected as unpatentable over the combination of Inuzuka and Dent. Applicants respectfully traverse these rejections as follows:

Regarding claims 7 and 15, the above remarks are applicable. Since each of these claims is dependent from an allowable base claim, they too are believed allowable. Additionally, a reading of the Dent reference does not yield any teaching or suggestion sufficient to cure the defects of the Inuzuka reference over the independent claims from which claims 7 and 15 depend, discussed at length above. Indeed, the Dent reference is not being used to teach generation of a local oscillator signal without use of a piezoelectric crystal. Rather, it is used solely to address the additional recitations of claims 7 and 15.

Claim 8 is rejected as being unpatentable over the combination of Inuzuka and Armstrong. Applicants respectfully traverse these rejections as follows: Regarding claim 8, the above remarks are applicable. Since this claim is dependent from an allowable base claim, it too is believed allowable. Additionally, contrary to the examiner's assertion that Inuzuka discloses a frequency converter that would be obvious to combine with Armstrong's multiple conversion frequency converter, Applicants can find no teaching in Inuzuka of a frequency converter; indeed, this term does not even appear in the reference. Rather, a single converter, single mixer is shown in FIG. 12 of the Inuzuka reference. Applicants therefore respectfully submit that there is no teaching or suggestion to combine the single converter of Inuzuka with a multiple conversion frequency converter of Armstrong.

In view of the above, it is submitted that claim 8 is allowable as presented. Reconsideration and allowance are respectfully requested.

Claims 5, 6, 16, 17 and 22 are rejected as unpatentable over the combination of Inuzuka, Dent and Naden. Applicants respectfully traverse this rejection.

Regarding claims 5, 6, 16, 17 and 22, the above remarks with respect to Inuzuka are applicable. Since each of these claims is dependent from an allowable base claim, they too are believed allowable. Additionally, the various types of frequency generators that may be employed are discussed at page 6, lines 1-7; page 9, lines 13-19; and page 10, lines 8-30 of the specification as filed. While Naden does discuss use of a voltage controlled oscillator, it is not necessarily arbitrary what type of oscillator is to be used. As described in the specification, such as at page 10, line 16 to page 11, line 4, the type of frequency generator used can influence the operating performances achieved.

In view of the above, it is submitted that claims 5, 6, 16, 17 and 22 are allowable as presented. Reconsideration and allowance are respectfully requested.

Regarding Allowable and Allowed Claims

Applicants note with appreciation that claim 29 is allowed and claim 4 is objected to, but would be allowed if rewritten in independent form. In view of the patentable subject matter believed contained in the independent claim from which claim 4 depends, however, Applicants accordingly decline to place claim 4 in independent form at this time.

Concluding Remarks

The undersigned notes that many other distinctions exist between the cited art and the claims. However, in view of the clear distinctions pointed out above, further discussion is believed to be unnecessary at this time. Failure to address each point raised in the Office Action should accordingly not be viewed as accession to the Examiner's position or an admission of any sort.

No amendment made herein was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim unless an argument has been made herein that such amendment has been made to distinguish over a particular reference or combination of references.

In view of this communication, all claims are now believed to be in condition for allowance and such is respectfully requested at an early date. If further matters remain to be resolved, the undersigned respectfully requests the courtesy of an interview. The undersigned can be reached at the telephone number below.

Respectfully submitted,

Renee' Michelle Leveque
Reg. No. 36,193
Leveque Intellectual Property Law, P.C.
221 E. Church Street
Frederick, MD 21701
301-668-3073
301-668-3074 fax